

CLAIMS

It is claimed:

1. A system for sequencing products, comprising:
 - 5 a plurality of input feeding devices each randomly receiving products from a stream of product;
 - a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the plurality of input feeding devices feeding the product to a plurality of
 - 10 output bins of the plurality of output groups; and
 - a control having a first mode of operation and a second mode of operation for the first pass phase and the second pass phase, respectively, wherein
 - in the first mode, the control allows all input feeding
 - 15 devices of the plurality of input feeding devices complete access to all output groups of the plurality of output groups during the first pass phase, and
 - in the second mode, the control constrains placement of the products to output groups assigned in the first pass phase such that the
 - 20 groupings of the products to the assigned output groups remain constant between the first pass phase and the second pass phase.
2. The system of claim 1, wherein the control, in the first mode, allows the products fed from any of the plurality of input feeding devices
- 25 access to any output group of the plurality of output groups based on a code of the products.
3. The system of claim 1, wherein the control assigns each input

feeding device to an associated particular output group of the plurality of output groups.

5 4. The system of claim 3, wherein the products, in the second pass phase, are fed through each of the assigned input device to each of the associated particular output group.

10 5. The system of claim 1, wherein each of the assigned output groups has a plurality of output bins such that, in the second pass phase, the products placed in the output bins of the each associated assigned output groups are fed to the each corresponding assigned input feeding device in a sequential order of the output bins in the each assigned output groups.

15 6. The system of claim 1, wherein the plurality of input devices is equal to the plurality of output groups.

20 7. The system of claim 1, wherein the control maintains a same grouping of output bins between the first pass phase and the second pass phase.

25 8. The system of claim 1, wherein the control constrains each of the input feeding devices, on the second pass phase, to feeding product, received from a previously assigned output group maintained from the first pass phase, to a same output group in the second pass phase.

9. The system of claim 1, wherein the each output group of the plurality of output groups is designated for a number of routes.

10. The system of claim 1, wherein the plurality of input feeding devices is at least two input feeding devices.

5 11. The system of claim 1, wherein the plurality of input feeding devices is four input feeding devices and the plurality of output groups is equal to a number of the plurality of input feeding devices.

12. The system of claim 1, wherein the products are mail pieces.

10 13. A system for sequencing products, comprising:
a plurality of input feeding devices each randomly receiving products from a stream of product;
a plurality of output groups corresponding to the plurality of input feeding devices during a first pass phase and a second pass phase, the
15 plurality of input feeding devices feeding the products to output bins of the plurality of output groups; and
a control allowing all input feeding devices of the plurality of input feeding devices complete access to all output groups of the plurality of
20 output groups during the first pass phase and assigning contiguous output bins to predetermined output groups of the plurality of output groups and associating each of the predetermined output groups with respective input feeding devices such that the predetermined output groups remain constant
between the first pass phase and the second pass phase.

25 14. The system of claim 13, wherein the control constrains placement of the products to the predetermined output groups assigned in the first pass phase during the second pass phase such that the groupings

of the products remain constant between the first pass phase and the second pass phase.

5 15. The system of claim 13, wherein the products, in the second pass phase, are fed through the respective input feeding devices to the associated predetermined output groups.

16. The system of claim 13, wherein the products are mail pieces.

10 17. A method of sequencing product, comprising the steps of:
providing a plurality of product from a stream of product to any of a plurality of input devices;
feeding each of the plurality of product, in a first pass phase, to an assigned group of output bins of a plurality of output groups based on a
15 code associated with the each of the product, the plurality of product being fed by the plurality of input devices; and
assigning each of the plurality of input devices to each of the assigned group of output bins.

20 18. The method of claim 17, further comprising the step of constraining placement of the plurality of product during a second pass phase to the assigned group of output bins such that the assigned group of output bins remain constant between the first pass phase and a second pass phase.

25 19. The method of claim 17, further comprising assigning each of the plurality of input devices to feed product of the plurality of product, during the second sort phase, to each of the assigned group of output bins.

20. The method of claim 17, wherein the plurality of products are mail pieces.